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A note on aerial branch-shoots in the rattan *Plectocomia mulleri*

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Summary. Rooted aerial branch-shoots naturally occurring in *Plectocomia mulleri* are described for the first time, in Sabah.

Plectocomia mulleri is a common species of rattan which is found in abundance on poor soils where the forest has been disturbed, and is very characteristic of some facies of kerangas (heath) forest (Dransfield 1984). It is one of two species of the genus known in Sabah.

During recent field work in the kerangas forest at the Ruku-Ruku Forest Reserve near Telupid, at about 150m a.s.l., six individuals of *Plectocomia mulleri* were observed bearing aerial branch-shoots. These rooted branch-shoots of about 30 cm in height were produced at the nodes of mature canes and resembled seedlings (Fig.1) This has not been documented before, although Dransfield (1984) has described such branches (which he termed " aerial suckers") for *Plectocomia elongata*, a montane species.

These individuals were solitary, high-climbing rattans with stems of about 30 m in length. The stem diameter without sheath was 1-2 cm and the internodes were 24-30 cm long. Two herbarium vouchers (deposited with the Sandakan herbarium, SAN) have been collected *viz.*, *Dewol* SAN 134913 (flowering male specimen) and *Dewol* SAN 134914 (fruiting specimen). These individuals were found in a patch of forest of about 100sq.m. These aerial branch-shoots developed vigorously whether or not the basal part and the main shoot of the cane were damaged. It appears that flowering also did not influence this behaviour as aerial branch-shoots occurred in both vegetative and reproductive individuals.

Such aerial branch-shoots have initially one leafy shoot each but later develop into clusters of shoots. Branch-shoots which are formed at the lower parts of the cane appeared more

Fig. 1. Aerial branch-shoots along a stem of *Plectocomia mulleri*.

vigorous compared with those formed at the higher middle part. This may be because roots of these aerial branch-shoots at the lower part of the cane can easily reach the soil (as was observed) and can directly absorb nutrients whereas suckers at the middle part cannot and depend entirely on the mother cane to provide nutrients.

Aerial branching of rattan stems is quite characteristic of *Korthalsia* species, where the stem actually branches high in the canopy (Dransfield 1979). In *Korthalsia*, such branches do not root. Elsewhere, Dransfield (1979) has also noted aerial branching in *Calamus simplex* in Peninsular Malaysia; in this species, however, the branches do not or at least seldom root even though at first they resemble small sucker shoots (K.M. Wong, pers. comm.).

The rooted aerial branch-shoots in *Plectocomia mulleri* would seem to be effective vegetative propagules, as each could potentially grow into a separate individual of the same clone. The relative commonness of this form of vegetative reproduction in nature has yet to be assessed though generally among rattans this is uncommon. It is possible that the production of widely spaced, rooted aerial branch-shoots is more effective in vegetative reproduction than basal suckers as fragmentation of the parent body disperses the new clonal individuals further apart, reducing competition among them and producing more physically separate indivuals.

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